In the United States Patent and Trademark Office

Serial No.: 10/550,855	§	Filing Date:
	§	
Title: FORMATION OF THIN SEMICONDUCTOR LAYERS BY LOW-ENERGY PLASMA ENHANCED CHEMICAL VAPOR DEPOSITION AND SEMICONDUCTOR HETEROSTRUCTURE DEVICES	§	Examiner:
	§	
	§	Art Unit: 1734
	§	
	§	
	§	
Applicant: VON KAENEL, Hans	§	Atty docket No: PUS-E005-013

INFORMATION DISCLOSURE STATEMENT

To: U.S. Patent and Trademark Office
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Dear Sir,

Pursuant to the provisions of 37 C.F.R. §1.97, Applicant encloses the references set forth in the attached modified form PTO/SB/O8A. No inference should be made that the cited references are in fact material, are in fact prior art, are analogous art, or that no better art exists. The cited patents are listed in numerical order and not in any order based on their pertinence.

It is requested that the Examiner fully consider the cited references and that they be cited on the front of any patent issuing from this application.

An early action on the merits is respectfully requested.

If the Examiner has further questions, he is invited to contact the undersigned at phone 011-4171 230 1000, fax at 011-4171 230 1001 or e-mail at sherman@patentinfo.net.

Respectfully submitted,

Date: 15 June 2006

Sherman D. PERNIA
U.S. Reg. No. 34,404

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PTO/SB/08A (07-05)
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(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known	
Application Number	10/550,855
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First Named Inventor	VON KAENEL, Hans
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Examiner Name	
Attorney Docket Number	PUS-E005-013

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 6,454,855	09/24/2002	VON KAENEL et al.	entire document
		US- 2002/0056414	05/16/2002	SHIM et al.	entire document
		US- 2002/0139996	10/03/2002	JAGANNATHAN	entire document
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FOREIGN PATENT DOCUMENTS

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		EP 1 315 199	05/28/2003	VON KAENEL	entire document	
		WO/1998/058099	12/23/1998	VON KAENEL et al.	entire document	
		WO/2003/044839	05/30/2003	VON KAENEL	entire document	

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NON PATENT LITERATURE DOCUMENTS

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	1	KASPER et al., New virtual substrate concept for vertical MOS transistors, Thin Solid Films, Vol. 336, p. 319-22 (1998)	
	2	BAUER et al., Relaxed SiGe buffers with thicknesses below 0.1 um, Thin Solid Films, Vol. 369, p. 152-56 (2000)	
	3	HACKBARTH et al., Alternatives to thick MBE-grown relaxed SiGe buffers, Thin Solid Films, Vol. 369, p. 148-51 (2000)	
	4	UENO et al., Low temperature buffer growth for modulation doped SiGe/Ge/SiGe heterostructures with high hole mobility, Thin Solid Films, Vol. 369, p. 320-23 (2000)	
	5	KUCHENBECKER et al., Thin SiGe buffer layer growth by in situ low energy hydrogen plasma preparation, Thin Solid Films, Vol. 389, p. 146-52 (2001)	
	6	FITZGERALD et al., Totally relaxed GeXSi1-X layers with low threading dislocation densities grown on Si substrates, Appl. Phys. Lett., Vol. 59, p. 811-13 (1991)	
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	8	LINDER et al., Reduction of dislocation density in mismatched SiGe/Si using a low-temperature Si buffer layer, Appl. Phys. Lett., Vol. 70, p. 3224-26 (1997)	
	9	LI et al., Relaxed Si0.7Ge0.3 layers grown on low-temperature Si buffers with low threading dislocation density, Appl. Phys. Lett., Vol. 71, p. 3132-34 (1997)	
	10	PENG et al., Relaxed Ge0.9Si0.1 alloy layers with low threading dislocation densities grown on low-temperature Si buffers, Appl. Phys. Lett., Vol. 72, p. 3160-62 (1998)	

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	11	ROSENBLAD et al., A plasma process for ultrafast deposition of SiGe graded buffer layers, Appl. Phys. Lett., Vol 76, p. 427-29 (2000)	
	12	VON KAENEL et al., Very high hole mobilities in modulation-doped Ge quantum wells grown by low-energy plasma enhanced chemical vapor deposition,	
		Appl. Phys. Lett., Vol. 80, p. 2922-24 (2002)	
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	16	SCHUEGRAF et al., Handbook of thin-film deposition processes and techniques, Noyes Publications, New Jersey, US, p. 26-79 article by M.L. HAMMOND (1988)	
	17	MANTL et al., Strain relaxation of epitaxial SiGe layers on Si(100) improved by hydrogen implantation, Nucl. Instr. and Meth. in Phys. Res., Vol. B 147, p. 29-34 (1999)	
	18	HOLLAENDER et al., Enhanced strain relaxation of epitaxial SiGe layers on Si(100) after H+ ion implantation,	
		Nucl. Instr. and Meth. in Phys. Res., Vol. B 148, p. 200-05, (1999)	

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	19	HOLLAENDER et al., Strain relaxation of pseudomorphic Si1-XGeX/Si(100) heterostructures after hydrogen or helium ion implantation for virtual substrate fabrication,	
		Nucl. Instr. and Meth. in Phys. Res., Vol. B 175-177, p. 357-67 (2001)	
	20	HERZOG et al., Si/SiGe n-MODFETs on Thin SiGe Virtual Substrates Prepared by Means of He Implantation, IEEE Electron Device Letters, Vol. 23, p. 485-87 (2002)	
	21	LYUTOVICH et al., Thin SiGe buffers with high Ge content for n-MOSFETs, Materials Science and Engineering, Vol. B89, p. 341-45 (2002)	

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